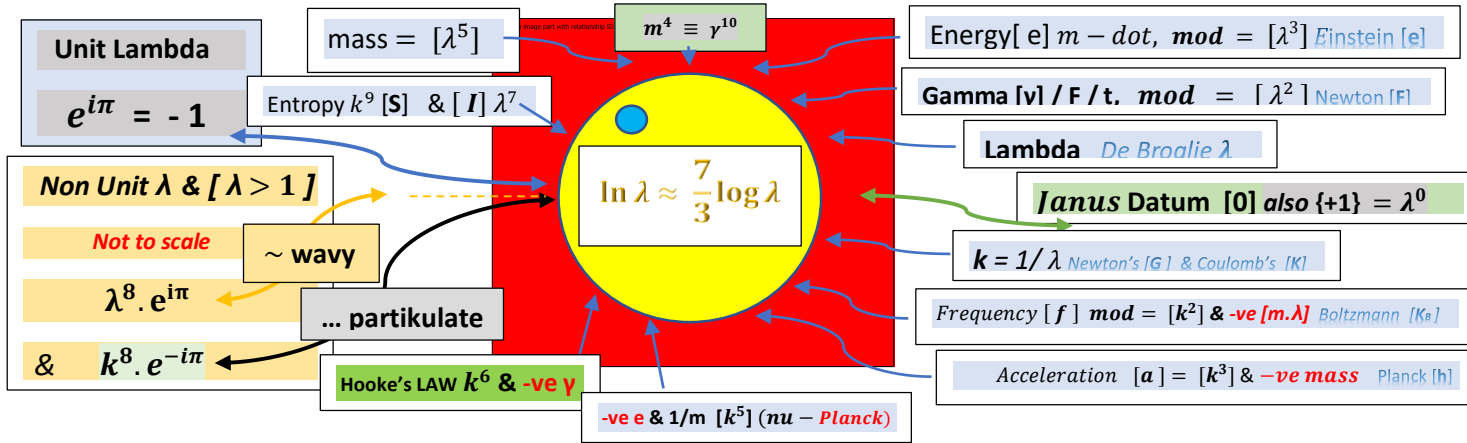


**$\Lambda$  - Model for Physical Systems in Nature:**

Matagouri 27nov2018



**Fig.1 Model lambda**  $[\lambda \cdot e^{\frac{i\pi}{8}}]^n$   $[\lambda s \neq 0]^*$  is a spinning number rotating with +ve &/or -ve  $[n]$  integer

From **Janus datum**  $[0]$  at  $(n=0)$  r.h.s., thus  $\left[\lambda \cdot e^{\frac{i\pi}{8}}\right]^0 = [\lambda^0 \cdot e^0] = [1 \cdot 1] = 1^2 = \text{Unity modulus}$ ,  
to  $\{n \rightarrow \infty\}$ ? capped here at  $(n = +/- 16)$  becomes  $\lambda^{16} \cdot e^{i2\pi}$  or modulus  $[\lambda^{16}] \times [1 \text{ complete [a.c.w] revolution}]$ .

The -ve integers contribute *simultaneously* one suspects? a clockwise **[cw]** revolution

from datum unity, to  $[\lambda^{-16} \cdot e^{i(-2\pi)}]$  These *contraries* are seamlessly connected at Unity or zero peg above,

and resonate with +ve & -ve '**arrows of time**' in Physik.

This quasi *continuum locus* looks like an integer **quantized**, or step indexed *Logarithmic spiral*  $\times [2]$ .

***Eadem mutata resurgo.***

As the Lambda model is **scale invariant**, the **Einstein continuum** is preserved in principle, yet each lambda system has its own chunked **De Moivre** type, & displays integer based **Bohr model** characteristic.

Thus we can view the classic **Euler identity**  $e^{i\pi} + 1 = 0$  in model terms as,  $\lambda^8 \cdot e^{i\pi} = -ve \ 1$

where 'unit' lambda applies.

The negative Unity is thus equivalent to model **[m.m - dot] = mass x energy** product.  $[m - dot \equiv [dm/dt] \equiv m/\gamma]$

&  $[k^8 \cdot e^{-i\pi}]$  in clockwise sense, again for a unity lambda scenario only.

$$\text{System}[k] = \frac{1}{\lambda} \text{ or generally } \lambda^{-n} = [k^n].$$

Example  $(n = 16)$  thus  $[\lambda^{16} \cdot e^{i2\pi}]$ , has an equivalent in system parameters of  $[m^3 \cdot \lambda]_s = \text{lambda}^{16}$

i.e. as 1 {element} highest order **[16]**, general degree **[n]** of truncated string polynomial system here.

Rearranged as  $e^{i2\pi} \cdot \lambda^{16} - m^3 \lambda = 0$  has **16 complex root solutions**, i.e. generic root  $[\lambda \cdot e^{\frac{i\pi}{8}}]$

& generally scaling via system lambda & exponent  $[n = +/- \{0,1,2,3...\}]$  applies all *pegs of the wheel* above.

This *physical\** model  $[\lambda s \neq 0]$  allows also for -ve integers as discussed, to illustrate dynamic **equilibrium forces** at work in a 'closed' & yet **evolving\*** balanced Lambda system. i.e. potentially a *duplex set*  $[16 \times 2]$  of

contemporaneously acting +ve & -ve integer cycles, counter phase & respectively  $[\lambda^n \text{ \& \& } k^n]$  defines the model  **$\lambda$  - scheme in Nature.**

## The Veritas identity & System Omega in the Physikle $\Lambda$ -model.

System Omega  $\omega = \left[ \frac{k}{m} \right]$  appears quite generally in Nature's Laws & familiar Physics identities & relationships.

*Thus we introduce a new lambda model version of System omega  $[\omega]s$ , & respectfully suggest 'omega' may be masked historically through variant essentially classical expressions, yet can be discovered anew via 'trial by Algebra'.*

First we introduce a Platonik identity invented, discovered, or imagined by the Author and known as the Veritas equation, given here.

$$1. \quad h - dd . \lambda = h . \lambda - dd$$

$$1.a \quad \frac{h - dd . \lambda}{h . \lambda - dd} = 1$$

$[-dd]$  means 'double' - dot or  $\frac{d^2}{dt^2}$ , where  $[-dot]$  is likewise  $\frac{d}{dt}$

Newtonian dot notation is implied, albeit somewhat nuanced in a model parametrik sense, i.e. dots may flow freely under action of a system omega, and in this fluid or *fluxions* sense, a standard both-ways *time symmetry* is invoked. What is non-standard is that system time  $\{t\}s$  and system general force  $\{F\}s$  are synonymous, or actually *identical* with the system gamma  $[\gamma]s$ .

A model hypothesis is such that a '**time is force**' argument applies. subscript  $[s]$  = 'system' as applied in the Lambda model

Also system Omega is negative system gamma, or  $\omega \equiv -ve F$

$$2. \{ \omega = -ve \gamma \} s \quad \text{from} \quad \lambda - dd = \frac{\lambda}{h} . h - dd \quad \text{gives} \quad a = \frac{\omega}{-m}$$

Equation 2. is in effect **N.3.L. & Hooke's Law**  $[F = -kx]$ , or  $Fs = \{-ve \lambda . \lambda\}s$

in this model, 2.a.  $[\omega]s = -ve \{t\}s$  also.

We introduce **System Omega**: 3.  $\left[ \omega = \frac{mm}{\gamma^8} \right] s = [\gamma^{-3}]s$  also, & or equivalently we can get

$$3.a \quad \left[ \omega = \frac{k}{m} \right] s$$

this is the simple version, and reflects a '**wave - partikle**' *mutuality* in this model.

Where  $[k]s$  is the wave number of the system, classically  $\left[ k = \frac{1}{\lambda} \right]s$ , thus

$$3.b \quad \omega m \lambda = 1$$

& a model **de Broglie** expression can be inferred

$$4 \quad \lambda = \omega m \gamma$$

Where subscript  $[s]$  is generally implied going forward e.g. \* system lambda  $[\lambda] = [\lambda]s$

note: system gamma = system lambda squared, in modulus sense & a literal expression of **K.2.L. Area  $\equiv$  time**.

$$5. \quad [\gamma] = [\lambda^2]$$

and from 3.above  $[mm]$  must be  $\gamma^5$

or we get system mass  $[m]s$

$$6. \quad [m] = [\lambda^5]$$

We can see from previous identities that all parameters can be expressed in lambda or [k] numbers of any physical \* system under inspection.

In partikular 'Geometry reigns' & Keplerian '**time shells**' act forcefully (i.e. conservative  $[-veF]$ ),

as concentric laminae **orthonormal** to  $[x, y, z]$  dimensions, of a Gaussian style mass distribution scheme  $\sum \rho . dV$

By physical \* we mean,  $\lambda s \neq 0$ , which implies also,  $m \neq 0$

Obviously the **k** – number is the reciprocal lambda number, etc, or classically

$$k^n = \frac{1}{\lambda^n}$$

So if lambda cubed (classically a volume **V**) yields energy,

$$\text{we may call this } m - \text{dot} \equiv \left[ \frac{dm}{dt} \right] = \frac{m}{\gamma}$$

The reciprocal **k** – number scenario would be inverse volume or  $k^3$ , and we call that **acceleration**

$$\text{or, } \frac{d^2\lambda}{dt^2} = \text{lambda} - dd = \text{acceleration } [a] = k^3 = k - \text{dot} = [k/\gamma]$$

All identical we call this the **gravity pixel** in the lambda model,

And further add that  $[a]$  is identical with **negative mass**, or

$$[a] \equiv -ve m = m - dddd = m - '4 \text{ dots}' = \frac{m}{\gamma^4} \equiv \frac{d^4[m]}{dt^4}$$


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The negative operator is  $\frac{1}{\gamma^4}$  and adds a  $\frac{1}{2}$  cycle clockwise rotation in the model

w.r.t horizontal, the standard r. h. s. datum \* on a unit lambda complex wheel

Thus 2 negative operators in tandem gives 1 full c.w. rotation.

In essence system 'inertial mass' lies on  $\lambda^5$  a.c.w. &  $-ve$  mass lies on  $\text{lambda}^{-3}$  c.w. phase sense \*.

Mass having being divided by  $\text{lambda}^8$  here, as  $\gamma \equiv \text{lambda}^2$ , stated previously.

**The model views inertial mass as Action, and  $-ve$  mass as reaction or  $-ve$  action.**

$$\text{Or, } \text{Action } 7. \quad \gamma . m - \text{dot} = m,$$

$$\& \text{ } -ve \text{ Action } 8 \quad -ve[\gamma . m - \text{dot}] = -ve m$$

$$\text{can be } 8.a \quad -ve \text{ mass} = [ \{ -ve \gamma . \text{energy} \} \leftarrow (+) \rightarrow \{ \gamma . -ve \text{energy} \} ]$$

[2]states in omegik superposition

$$\text{We note here that } -ve \text{ energy is } \left[ \frac{\text{lambda}^3}{\gamma^4} \right] = \left[ \frac{\lambda^3}{\lambda^8} \right] = \frac{1}{\lambda^5} = k^5 = \frac{1}{m} \text{ reciprocal mass.}$$

Which supplies a useful model standard utilising  $[-ve m - \text{dot}] = \frac{1}{m}$  thus a variant model gamma, in

$$9. \quad -ve [m . m - \text{dot}] = 1$$

and equivalent to

$$\text{Unity} = [ \{ -ve \text{ mass.energy} \} ] \leftrightarrow (+) \leftrightarrow [ -ve \text{ energy.mass} ]$$

[2] states convergent at r. h. s. datum peg  $[\lambda s^0 = +ve 1]$ , on Unity model complex wheel.

With a little work most if not all of the previous identities can be morphed into & flow thro each other,  
and we quote some model standards with resonance to classical familiars.  
from previous view w.r.t Action =  $m$ ,  $-ve$  Action =  $-ve\ m = Reaction \equiv [a] \sim gravity$   
The product [ action x reation ] yields the Gamma 'force' or N.2.L. & U.L.G.

$$10. \quad \gamma = -m.m \quad \text{or} \quad [m. -ve m] \equiv F = ma$$

& with the  $-ve$  Operator applied to 10. we get omega

$$11. \quad \omega = -ve . -ve [m.m]$$

$$11.a \quad \omega = [ \{ - - m . m \} \leftarrow (+) \rightarrow \{ -m . -m \} \leftarrow (+) \rightarrow \{ m . - - m \} ] \quad [3] - states$$

as  $acc = -ve\ mass$  then,  $-ve\ a \equiv -ve . -ve\ mass$

$$-ve\ a = \left[ \frac{m}{\gamma^8} \right] = \frac{\lambda^5}{\lambda^{16}} = \frac{1}{\lambda^{11}} = k^{11} \quad [c.w] \text{ phase rotation}$$

$$\text{now } k^{11} = S - dot = \frac{S}{\gamma} \equiv \frac{dS}{dt} \quad i.e. \text{ entropy - rate}$$

thus entropy  $[S] = k^9$  & also, [c.w] sense

Thus we can produce another model omega expression

$$11.b \quad \omega = -ve . -ve [m.m]$$

$$\text{thus } 11.c \quad \omega = [mS] - dot$$

& expanded to

$$\omega = \{ [ m - dot . S ] \leftrightarrow (+) \leftrightarrow [ m . S - dot ] \}$$

$$\text{System Omega} = [ \{ energy \times entropy \} \leftrightarrow (+) \leftrightarrow \{ mass \times entropy rate \} ]$$

this last offers aid for darkness paradigms currently in vogue in Physik.

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The model views energy in the classical way, say in conventional

Newtonian, Hamiltonian or Lagrangian sense, i.e.

these express any dynamic system of kinetic & potential energy states in mutual fluxion/s.

This is composite or lumped together energy  $m - dot$  in a general model sense,

where the  $[-dot]$  operator is frequency,  $f = 1/t$

thus the model contends,

$$12. \quad [\lambda - dot]^2 = [\lambda . \lambda - dd] \text{ is likewise a frequency or } \left[ \frac{1}{\gamma} \right] \text{ expression.}$$

as  $\lambda - dot$  is a k-number, this is classically a velocity expression

$$\text{Where } \lambda - dot = \left[ \frac{\lambda}{\gamma} \right] = \left[ \frac{dx}{dt} \right] = v, \text{ as } \lambda \text{ can be } \{x\} \text{ of course.}$$

So we may readily derive justification in 12. for Fitzgerald - Lorentzian effects, such as length contraction etc,



**A model maxim is developed.**

*A terrible beauty is born*

**Large Lambda schemes have low magnitude  $[k]$  – numbers, and thus very small acceleration number.**

**Conversely very small lambda schemes have large magnitude**

**$[k]$  – number & thus very large acceleration ... 'gravity'.**

*We can further add*

**Large schemes possess low magnitude entropy  $[S]$  & very low entropy rate  $[S] - \text{dot}$ , respectively.**

**Conversely large magnitude  $[S]$  & even higher  $\left[\frac{dS}{dt}\right]$  are experienced in micro – lambda schemes.**

*A fearful symmetry*

*seems apparent at Cosmological & quantum scales in Nature.*

*Contrari – wise Enantiomorphik System. See figs 2 & 3 p.6*

***This maxim is counter to the standard view that the twain never meets in Quantum & Classically relativistic models, thus an 'idee fixe' developed. Science must! find a holy grail solution such as 'quantum gravity' to fix the disparity❖.***

***The 'dichotomy' is potentially a phenomenological perspective only, largely historical in basis, & erroneous one might suspect.***

***Local System Model***

**❖  $[h \equiv a]$  dispels this thro equality alone of course, yielding a literal quantized gravity.**

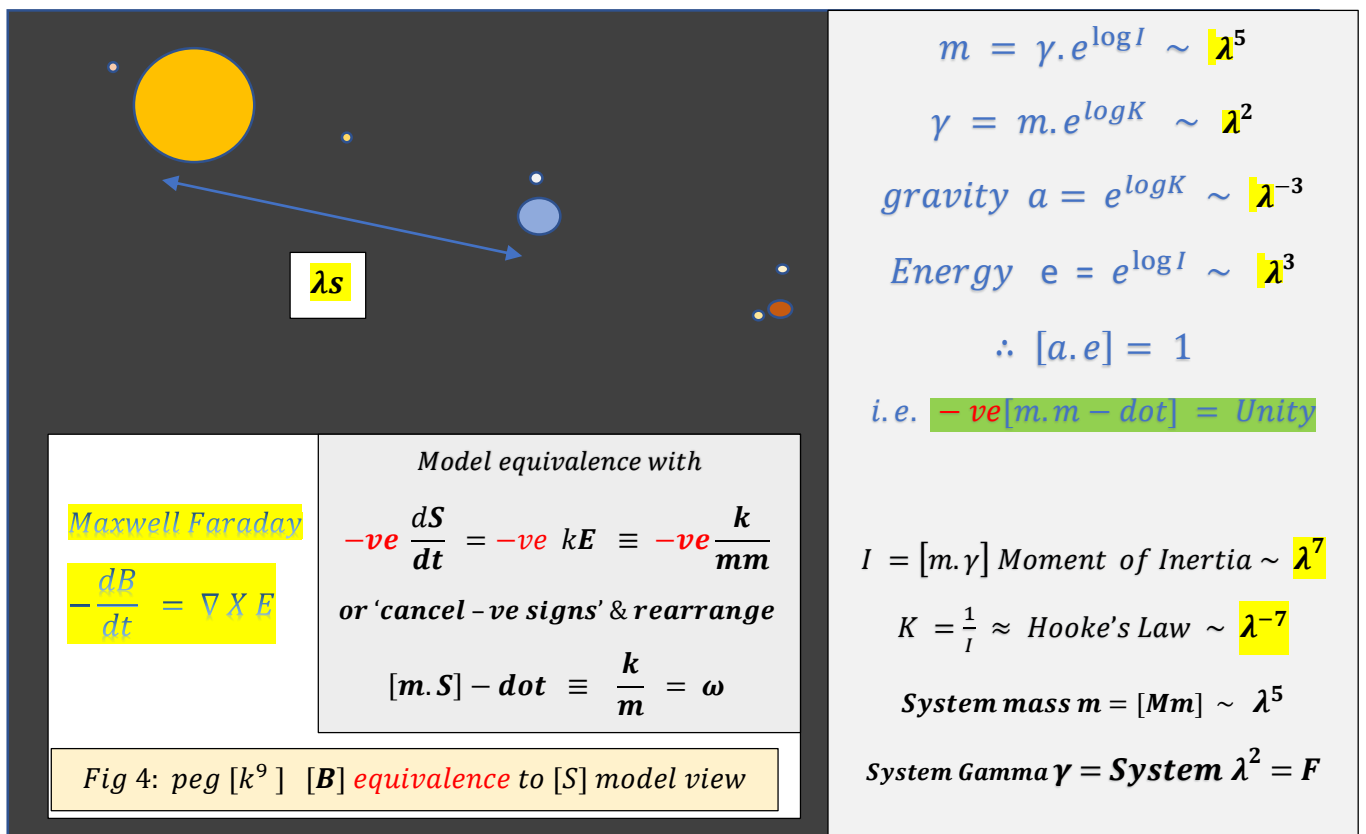
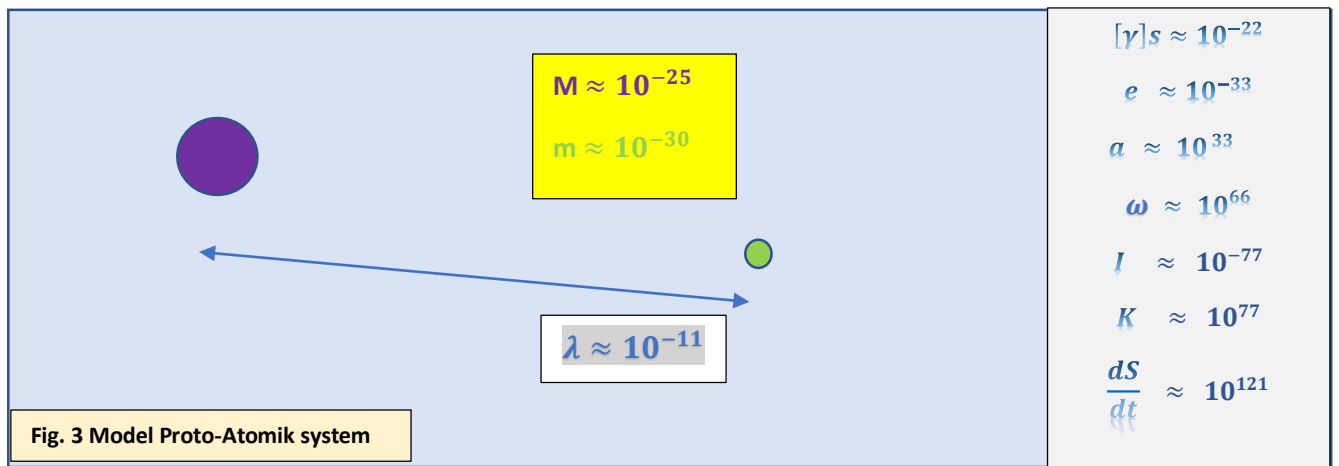
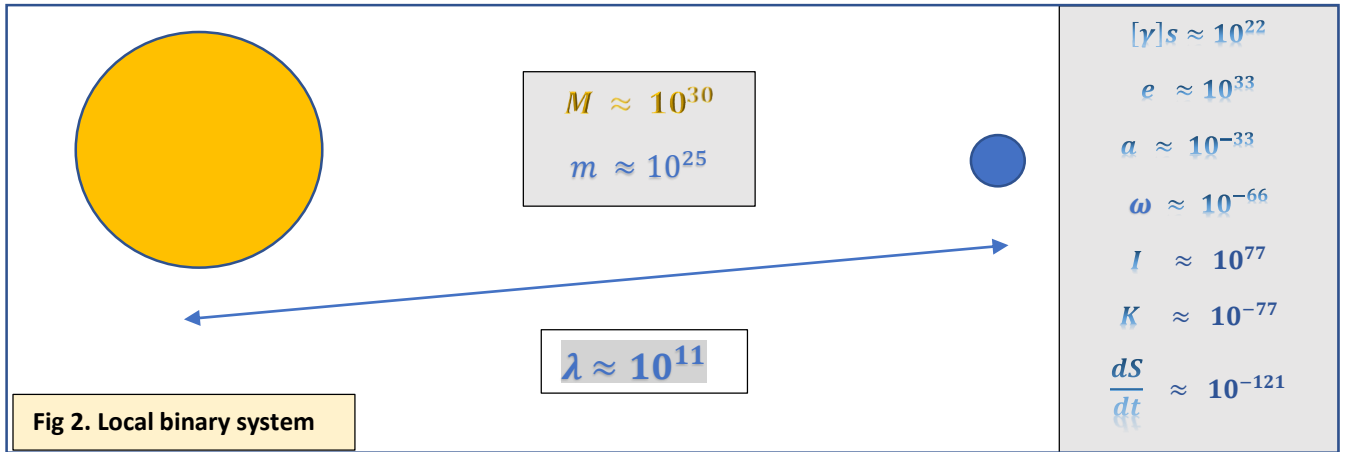
***Physical lambda model adherents maintain that it is mistaken to mean fundamentally different physics, 'awaiting unification' is at work in the realms of the very small & very large .***

***In the  $\lambda$  – model, scale is invariant and model Physik rules are quite general, regardless of size, for any particular scheme/s under investigation.***

**Model statement: There are no Universal constants, rather there are \*multiple sets of potentially 'unique' system numbers**

**In multiple lambda schemes, which operate under Universal laws.**

***Model antidote for \* multiverse paradigm.***



Let's look at some examples:

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Keplers 3rd Law

$$\frac{R^3}{T^2} = \text{constant } [k]$$

Or in model terms,  $R = \{r\} = \{x\} = [\lambda]$  or system lambda, thus

$$\begin{aligned} \frac{\lambda^3}{\lambda^4} &\equiv \frac{\lambda^3}{\gamma^2} = \frac{\text{energy}}{\text{momentum}} = \frac{m - \text{dot}}{p} \\ &= \frac{m - \text{dot}}{\gamma^2} \\ &= \frac{m}{\gamma^3} \\ &= \omega m \end{aligned}$$

& as product  $[\omega \cdot \text{mass}]$  equates to a system  $[k] - \text{number}$

i.e.  $\omega m = k$ , Keplers costant is the  $k - \text{no}$  of our local 'Binary System' or Newtonian  $G$ .

This allows us to gauge Solar scheme Omega at the Earth remove.

We use o.o.m. calculations and no units, or we end up with dimensionless ratios on occasion

otherwise the S.I. relevant unit or units are always implied.

$$\text{Let } M = 10^{30}, m = 10^{25},$$

& let system mass  $[m]s = \text{binary product } [Mm]$ , law of lever resonance.

and as the de Broglie yardstick is  $\lambda s = 10^{11}$

$$\begin{aligned} \text{Then System Omega *, gives, } \omega &= \frac{k}{m} \\ &= \frac{1}{[m \cdot \lambda]} = \frac{1}{[10^{55} \cdot 10^{11}]} \\ &= 10^{-66}. \end{aligned}$$

And as  $\Omega = a^2$  then our local system acc pixel  $-ve \text{ mass} = \sqrt{[10^{-66}]}$

=  $-ve m = [a] = \text{modulus circa } [h] \text{ the Planck unit of Action,}$

we see it as  $-ve \text{ action of course.}$

\*  $[k - \text{dot}]^2 = [k \cdot k - dd]$  is equivalent to system Omega, i. e. see final note: p. 25.

$$a^2 = k \cdot \frac{1}{m} = \text{Omega}$$

Conjecture w. r. t. Equation 12.  $[\lambda - \text{dot}]^2 = [\lambda \cdot \lambda - dd]$

a transfer of one r. h. s. 'denominator' lambda is a first step to

K.3.L if  $[k]$  i. e. thus also  $[k^2]$  is kept 'relatively constant' the *reciprocity relationship* for the product  $[\lambda \cdot a]$

as conveyed in the model maxim, can be a candidate explanation for the **Galactic rotation curves** conundrum.

The observations multiply support flat – ish velocity rotation curves, [12.] produces a ready **M.O.N.D.** style explanation,

actually a *metrik density*  $[\text{Gamma} = \text{Rho}]$  formalism, ... sans darkness.

Instead of looking for 'missing' mass, we might look at  $F \propto \frac{1}{r^3}$  where locally  $\gamma = mh$  where **system**  $m = [Mm]$  &  $h = k^3$

In any case equation 12. is effectively, a classical  $mv^2 = mgh$ , where,  $[v = k = \frac{\lambda}{\gamma}] = \text{lambda} - \text{dot}$ ,  $[g = a]$  &  $[h = \lambda]$ , we might now also restore a 'cancelled' system mass  $[m]$  & omit the  $1/[2]$  factor from the *Kinetic* l.h.s, we say the  $[2]$  can be fashioned as states, or

$$[\lambda - \text{dot}]^2 = [\{\lambda \cdot \lambda - dd\} \leftrightarrow (+) \leftrightarrow \{\lambda - dd \cdot \lambda\}] = \{[\lambda \cdot a] \leftrightarrow (+) \leftrightarrow [a \cdot \lambda]\} = [2] \text{states, trivially redundant:}$$

or in *lambda script*

$$\left[ \frac{\lambda}{\lambda \cdot \lambda} \cdot \frac{\lambda}{\lambda \cdot \lambda} \right] = \lambda \cdot \left[ \frac{\lambda}{\lambda \cdot \lambda \cdot \lambda} \right] \quad \text{transfer 1 lambda to l. h. s. gives,}$$

$$\frac{[\lambda \cdot \lambda \cdot \lambda]}{[\gamma \cdot \gamma]} = \left[ \frac{\gamma}{\lambda \cdot \lambda \cdot \lambda} \right] \quad \text{i. e.} \quad \left\{ \left[ \frac{r^3}{t^2} \right] = \left[ \frac{t}{e} \right] \right\} \equiv k \quad \text{where } \lambda^2 = \gamma, \text{ \& } t^2 = \gamma^2 = p$$

& as  $\{ r^3 \equiv \lambda^3 = \text{energy} \equiv [m - \text{dot}] \}$ , we can say  $\left[ \frac{e^2}{t^3} \right] = \text{Unity}$ , pseudo style K.3.L. a la mode

$\frac{\&}{\text{or}}, \{ \text{energy}^2 = \text{mass} \times \text{lambda} \} = \gamma^3$  or, *reciprocal omega*, ... now we can look at Dirac.

#### Dirac's relativistic electron equation rendered into the model

$$m\{\psi\} = i \cdot \gamma \frac{d[\psi]}{dx}$$

$$\text{in 1 - d here say,} \quad \text{thus } \frac{d}{dx} = \frac{d}{d\lambda} = \frac{1}{\lambda} \quad (\text{approx.}) = [k]s$$

in our model imaginary  $\{i\}$  is equivalent to system momentum, thus

$$\{i\} = p = \text{gamma}^2 = \text{lambda}^4 = \sqrt{[m \cdot m - \text{dot}]} = \sqrt{(-1)}$$

also, we can cancel Psi both sides, for clarity, i. e. the pared down model Dirac, now gives

$$m = k/\omega$$


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Schrodinger

$$i \cdot \hbar \frac{d\{\psi\}}{dt} = H\{\psi\}$$

Again 'cancelling'  $[\psi]$  or allow  $\Psi = \text{Unity}$ , let  $[i = p]$  as before, &  $\frac{d}{dt} \equiv -\dot{\phantom{x}} = \frac{1}{\gamma}$

& as  $\hbar = \left\{ \frac{h}{2\pi} \right\}$ , we ignore factor [2] as indicating perhaps 2 – states.

We get,  $\{i \cdot \hbar\} - \dot{\phantom{x}} = \text{energy}$  or,

$$[ \{ i - \dot{\phantom{x}} \cdot [\hbar - \text{bar}] \} \leftarrow (+) \rightarrow \{ i \cdot [\hbar - \text{bar}] - \dot{\phantom{x}} \} ] = m - \dot{\phantom{x}},$$

where we allow for a possibility of +ve/-**ve** energy on r.h.s.

$$\text{Firstly, } \hbar = -\text{ve} \frac{\text{mass}}{(2)\pi}$$

$$= -mp, \quad \text{as } 1/\pi = p$$

$$= ap = k^3 \cdot \lambda^4 = \lambda \text{ in this case}$$

then  $\{i \cdot \hbar\} - \dot{\phantom{x}}$  gives,

$$[p \cdot \lambda] - \dot{\phantom{x}} = [ \{ p - \dot{\phantom{x}} \cdot \lambda \} \leftrightarrow (+) \leftrightarrow \{ p \cdot \lambda - \dot{\phantom{x}} \} ] s$$

$$\text{or [2] states } [ \{ \gamma \cdot \lambda \} \leftarrow (+) \rightarrow \{ p \cdot k \} ] = \text{energy} = \text{modulus} [ \lambda^3 ]$$

Now +ve energy = reciprocal acceleration (gravity) or,  $[a \cdot e] = \text{Unity}$

& if we plumb for -**ve** energy, ... that is identical to reciprocal mass.

So we see in the generalized T.D.S.E,

we have a very full exposition of the scheme, in either & both,

a dynamic Superposition of [2]states

$$-\text{ve}[\text{mass} \cdot \text{energy}] = \text{Unity}, \quad \text{identically } [\text{acceleration} \cdot \text{energy}]$$

&/or

$$[ \text{mass} \cdot -\text{ve energy} ] = \text{Unity} = \left[ \frac{m}{m} \right]$$

A system incorporating +ve & -**ve** aspects of mass & energy,

& gravity at face value and the system Omega within.

Maxwell & Faraday.

$$-\frac{dB}{dt} = \nabla \times E$$

We state some assumptions, the minus sign here  $(-)$  is model **-ve** Operator

(loosely for now)  $B$  can be  $[m.\gamma] * = \text{lambda}^7 \text{ unity wheel} * \text{peg coincident with both } [a.c.w.] * \text{moment of inertia } [I]$ , & also,  $[c.w] * \text{entropy } [S] = k^9$ , but we go with the former case here, in the first instance,

$$\text{so, } \frac{dB}{dt} = \frac{I}{\gamma} \equiv \frac{[m.\gamma]}{\gamma} = m$$

$$\text{thus, } -ve \frac{dB}{dt} = -ve \text{ mass} = [a]$$

$$\{t\} = [\gamma]s, \quad \nabla = Del = \frac{d}{dx} \text{ in } 1-d, \text{ and thus } = [k]s$$

$E = -ve$  frequency, and/or  $-ve. -ve[m.\lambda]s$  identically =  $-ve[\text{energy}^2]$  thus  $E$  yields  $1/mm$

& finally the classical  $[X]$  vector product, is also = **-ve** Operator  $= \frac{1}{\gamma^4}$

we get,

$$a = del \times E$$

$$= k \cdot -ve \frac{1}{mm}$$

$$= \frac{-vek}{mm}$$

$$= \frac{S}{mm}$$

$$= k^9 \cdot k^{10} = k^{19}$$

Now  $k^{19}$  is coincident with the 'peg'  $[k^3] = [a]$

on the familiar unit  $-\lambda$  complex wheel

after 1 full c.w. rotation by  $k^{16}$ , thus

$$-ve \text{ mass} = a$$

Note: The model uses a \*Unity lambda complex wheel with 16 pegs set apart at intervals of  $[\pi/8]$ .

The general lambda  $[\lambda s]$

$$14. \text{ System Lambda} = \left[ \lambda \cdot e^{i\frac{\pi}{8}} \right]^n \quad n = +/\{-0, 1, 2, 3, \}$$

+ve integers yield  $[\lambda]^n$  and -ve integers  $[k]^n$

These curves, cycle in acw & cw rotation sense, respectively.

Maxwell cont.

Similarly on the unity wheel, we see as stated previously, [B] & [S] share a coincidence peg, see Fig:4 p.6

therefore is it possible that [B] could be a micro lambda

phenomenon label for entropy [S] ?, and of course visa versa, say.

$$\omega = \left[ \frac{mS}{\gamma} \right] \approx \left[ \frac{mB}{\gamma} \right]$$

$$= [m.S] - \text{dot} = [ \{ m - \text{dot} . S \} \leftrightarrow (+) \leftrightarrow \{ m . S - \text{dot} \} ] \quad \&/\text{or}$$

$$= [mB] - \text{dot} = [ \{ m - \text{dot} . B \} \leftrightarrow (+) \leftrightarrow \{ m . B - \text{dot} \} ]$$

$$\text{Then } \frac{w}{m} = B - \text{dot} = \frac{k}{mm} = k.E$$

Thus we derive a familiar, **E = cB** can be found

$$B = E.[k\gamma] = E.\lambda \quad \text{thus}$$

$$E = \frac{B}{\lambda} \equiv kB = cB \quad \& \text{ now also } cS = kS = E = k^{10} \quad \& \text{ from}$$

$$w/m = B - \text{dot} \quad \dots \text{for quantum scale* systems}$$

allowing that the [B] – field phenomenon \*

$\equiv$  entropy [S], an historic mistook doppelganger, actually all 1 entity & running with it here.

$$[-m.-m]/m = dB/dt \quad \text{then,}$$

$$\text{-ve. -ve } m = \frac{dB}{dt} \equiv \frac{dS}{dt} = \text{-ve } [a], \quad \text{etc. We think gravity } [a] \text{ is -ve mass of the system}$$

& rate of Entropy is a doubly -ve mass, -ve.-ve [m] thus doubly ‘conservative or centric acting’ & we note magnetism is an attractive Force. It is commonplace to note that a magnetic source in a relatively small lambda scheme, (bar magnet) can overcome,... be more attractive, than the [g] force of a very large scheme, Planet Earth.

Thus localised gravity & dS/dt may be mutually emergent.

Currently Hypothesised as a ‘dark’ phenomenon. Glory be to dappled things,... & his dark materials.

w.r.t to generic Platonik identities in the model there are many 2<sup>nd</sup> order equations or identities which allow for resonance with Classical ideas.

Generally any sensible dummy parameter [\$]

+ve /-ve will do to emulate

$$\gamma.[\$] - \text{dot} = [\$]$$

examples,

$$[\$] = \{ \text{mass}, \quad \text{lambda}, \quad \text{Hooke } [K], \quad \text{entropy}, \quad \text{etc} \}$$

Which aligns well with another 2nd order type

$$[[\$] - \text{dot}]^2 = [\$].[\$ - dd]$$



*Thus we may look at the Lambda model System gravity pixellation from an array of  
cyclic & mutually iterative 'sources' especially so if we allow [c.w.] & [a.c.w] Unity complex wheel coincidence pegs.*

*e.g. {entropy [S] &/or [B] – field = [k<sup>9</sup>] or [λ<sup>7</sup>]} &/or*

*–ve mass = [a] = [k<sup>3</sup>], or [k<sup>19</sup>], or potentially? [λ<sup>13</sup>] or 'gravity angle',*

*aligning with some modern paradigms i.e. 'emergence phenomenon'*

*linking perhaps,*

*system rate of entropy  $\frac{dS}{dt}$  with –ve gravity – a, which is also, –ve. –ve mass, in rotation or phase sense.*

*Noted above that [B] like gravity is 'conservatively attractive', say  $\frac{dB}{dt} = -ve.-ve \text{ mass}$ , ... an uber-negative gravity 'force'*

*Huge in small schemes, tenuous in large systems.*

*This  $[dS/dt]$  can be a candidate for Einstein's Cosmological constant  $\Lambda$ , in our Solar scheme*

*'S – dot' =  $\left[\frac{S}{\gamma}\right] = [k]^{11} = 10^{-122}$ , circa some current estimates of  $[\Lambda]$  ... 'dark energy' perhaps?*

Maxwell cont.

We'll approach it differently here, allowing a 2<sup>nd</sup> order gamma differential or double dot [-dd]

Acting on Maxwell's equations.

$$-\frac{d^2 B}{dt^2} = \nabla \times \frac{dE}{dt}$$

in model terms,  $dE/dt = E - dot = 1/[m\gamma]s = k^{12} = \omega^2$

so we get

$$[-vem]/\gamma = -\omega^2.k \quad \text{now transpose the gamma}$$

$$-ve\ mass = -ve\omega^2.[\gamma k],$$

yields the familiar s.h.m. expression

$$-\omega^2.\lambda = a$$

By transferring the -ve sign, we get  $\omega^2.\lambda = -ve\ a = S - dot = \left[\frac{S}{\gamma}\right]$

$$= \frac{dS}{dt}$$

*allows gravity – entropy 'emergence' paradigm*

Lorentz Force equation

$$F = q [ E + v \times B ]$$

There are many routes through this to yield [+ve &/or-ve] force

i.e. [F] gives *gamma or omega* respectively.

The standard assumptions apply,

say charge = +ve or -ve, or +q, -q

Charge in this model is [m.k] gives [q] =  $\lambda^4$  or [p] perhaps,

& -ve[mk] = [-q] =  $k^4$  or [ $\pi$ ] perhaps

$$E = 1/mm = k^{10}$$

$$B = [m\gamma] = \lambda^7 \quad \text{or could be } [S] = k^9$$

We can say [X] product is -ve Operator or a standard multiplier {x}

Velocity [v] can be [c] &/or system k, of course.

Fun can be had & we get several reasonable results for variant input

& some feel,... *more natural than others*

### The Hamiltonian

$$(1) \quad dq/dt = +ve \partial H/\partial p$$

$$(2) \quad -ve dp/dt = \partial H/\partial q$$

*I'm allowing previous relaxations w.r.t. 'fairly wide latitude' applies to the formalism*

*i.e. I often make no distinction between partial  $[\partial]$  &  $[d]$ ,*

*and indeed freely cancel these on most occasions, to generate the 'pared down' identity or equation.*

*Generally the Hamiltonian is relaxed to*

$$[H] = \text{composite 'system' energy} = m - \dot{m} = \frac{dm}{dt}, \text{ etc}$$

$$[q = \text{lambda}], [p = \text{model momentum}], [t = \text{gamma}], \text{ etc}$$

*Thus, we get*

$$(1.a) \quad k = \omega m$$

$$(2.a) \quad -ve \gamma = [m - \dot{m}] \cdot k$$

$$\text{And as system gamma force} = [m \cdot k] - \dot{m} = [m - \dot{m}] \cdot k \leftrightarrow (+) \leftrightarrow [m \cdot k - \dot{m}]$$

*And we can say l.h.s. gamma in (2.a) = omega, from  $\omega = -ve [\gamma]$  and general commutativity*

*w.r.t. the minus sign, i.e. classically this can transpose across the equality, etc.*

*Note: The model sees an easier way than previous example, whereby we suggest, very respectfully, that a -ve sign may be missing on r.h.s. of conventional Hamiltonian [2],*

*but we can largely bypass that by rewriting Hamiltonian 1 in model terms*

$$H1: \quad \lambda - \dot{m} = \frac{m - \dot{m}}{p} \quad k = \frac{\text{energy}}{\text{momentum}} = \pi \cdot [m - \dot{m}] = \left[ \frac{m}{\gamma^3} \right]$$

*then simply post a -ve sign on both sides of H1 to give,*

$$H2: \quad -ve \lambda - \dot{m} = \frac{-ve m - \dot{m}}{p}$$

*Applying the model mode, we get*

$$H1: \quad k = \omega m$$

*as before, & H2: gives  $[-ve k] = [-ve \text{ energy/momentum}]$ , or*

$$H2: \quad S = -ve [\omega \cdot m]$$

$$S = [ \{ -ve \omega \cdot m \} \leftrightarrow (+) \leftrightarrow \{ \omega \cdot -ve m \} ]$$

*or an entropy expression, where alternatively we could say, Hooke's constant is differentiated once w.r.t. gamma,*

$$[dK/dt] = K/\gamma = K - \dot{K} = [k^7/\gamma] = S$$

$$S = k^9 \quad [\text{c.w.}] \text{ 'peg'}$$

Of course this begs the Q? why not differentiate model Hamiltonians once again, or more.

$$* H1 : \lambda - dd = \frac{m-dd}{p} \quad \text{gives } [a] = \text{-ve mass}$$

$$* H2 : -ve \lambda - dd = \frac{-ve m-dd}{p} \quad \text{gives -ve } [a] = dS/dt$$

Nothing very extraordinary here as we could emulate these new model entries by a minor variant on Hamilton's originals, for H1 alone, we could say.

$$H1.a: \quad \frac{\partial H}{\partial t} \cdot \frac{\partial t}{\partial p} = \frac{dq}{dt} \quad \text{allowing } \frac{dH}{dp} = \frac{dq}{dt}$$

$$\text{Or simplified to } \frac{H}{p} = \frac{\lambda}{t} \quad \text{or, } H.t = p.\lambda$$

that gives,  $\gamma.m - \text{dot} = \text{mass}$  of course., as  $[p] = \lambda^4$

H1.a: is identical to/& could also be, a la mode

$$\gamma - \text{dot} \cdot \frac{\partial H}{\partial p} = q - \text{dot} \quad \text{allowing } \left[ \frac{e}{p} \right] = k, \quad \& \quad \text{energy} = pk = [pc] \text{ familiar}$$

$$\& \quad [e.\lambda] = p$$

And something similar but also inclusive of the **-ve** Operator both sides  
for remodelled H2, where we said,  $H2 = \text{-ve } H1$

$$\text{-ve} \left[ \gamma - \text{dot} \cdot \frac{\partial H}{\partial p} \right] = \text{-ve} [q - \text{dot}] \quad \text{allowing } [\text{-ve energy}/p] = \text{-ve lambda}$$

and as **-ve energy** = reciprocal mass, and **-ve lambda** = Hooke [K], we get

$$1/mp = K - \text{dot}$$

[K] is Hooke's constant, or reciprocal Moment of Inertia  $[1/I]$

Then another gamma identity is found  $m.p.K = \gamma$   
now  $[m.K] = [\text{lambda}^5 . \text{Lambda}^{-7}] = 1/\text{lambda}^2 = \text{frequency}, f = 1/\text{gamma}$

$$\text{Thus } \gamma = pf = p - \text{dot} = \left[ \frac{p}{\gamma} \right] = \left[ \frac{dp}{dt} \right] = \gamma^2/\gamma$$

gives system gamma  $[\gamma]s = [F] = \{t\}$ , in this scheme.

Note: The classical Unity identity for reciprocal time & frequency  $[f = 1/t]$  also has a model analogue, in

$$[\gamma - \text{dot}]^2 \equiv [\gamma . \gamma - dd] \quad \text{i.e.} \quad 1^2 = t.f$$

in lambda script we devolve down to lambda script, thro gamma

$$\left[ \frac{\gamma.\gamma}{\gamma.\gamma} \right] \equiv \left[ \gamma . \frac{\gamma}{[\gamma.\gamma]} \right] \quad \text{to give,} \quad \frac{[\lambda.\lambda . \lambda.\lambda]}{[\lambda.\lambda . \lambda.\lambda]} \equiv [\lambda.\lambda] . \frac{[\lambda.\lambda]}{[\lambda.\lambda . \lambda.\lambda]}$$

Lambda script is representative of a lambda scheme 'operating iteratively on itself' at perhaps?  
some base Platonik geometrik level in Nature.

That is to imply, it is **One System lambda in 'fluxions'**. Not the multiples of lambda arrayed in the fashion we see immediately above, that is merely our pedestrian attempt at algebraic formalism emulating some as yet, unknown dynamik dimensionality in Nature,

& thus can be improved upon no doubt, with expanded lambda identity 14.  $\left[ \lambda.e^{\left[ \frac{lm}{8} \right]^n} \right]$  as approximation in our model.

Einstein, Planck, De Broglie & Heisenberg, et al

$$S.R. \quad \& \quad E = mc^2$$

becomes energy =  $m - \text{dot}$  = mass . frequency

$$E = m . k^2$$

*The model invokes a direct constant of proportionality for the mass energy equivalence*

*Which in effect is also a variant gamma.*

$$14. \quad \gamma . m - \text{dot} = m$$

*Which is a simple derivative from the system energy,  $e = [\text{mass}/\text{gamma}] = [dm/dt]$*

*Or the Action principle, as seen in Heisenberg's pared down Uncertainty Principle*

*Featuring energy & time in product, with  $[h]$  as the mimimun of action,*

$$E . t = \geq h, \quad \& \quad \text{also used in} \quad \Delta p . \Delta x \geq h$$

*Which can be pared back to yield Louie de Broglie's wave hypothesis*

$$\lambda = h/p$$

*the model explicitly allows for  $-ve$  mass =  $[h]$*

*thus we have [2] de Broglie's.  $+ve$  &  $-ve$  lambda in a sense*

$$1. \quad m = p . \lambda$$

$$+ve \text{ mass} = \text{momentum} \times \text{lambda}$$

$$= [\text{lambda}]^5, \quad \text{locally} [Mm]$$

$$2. \quad -ve \text{ mass} = -ve [p . \lambda] = [ \{ -ve p . \lambda \} \leftrightarrow (+) \leftrightarrow \{ p . -ve \lambda \} ]$$

$$= [\text{lambda}]^{-3}, \quad \text{locally} -ve [Mm] = [h]$$

$$2. \text{ gives } acc [a] = \{ [\pi . \lambda] \leftrightarrow (+) \leftrightarrow [p . K] \}$$

*where  $[p] = \lambda^4$ , &  $[K] = k^7 = \text{Hooke's constant}$ .*

As we introduced de Broglie here, we see the **Photo – electric effect** and the **Einstein – Planck** relationship has similarly modelled omega attributes.

$$E = h.v \text{ can possess (+ve/-ve) flavours,}$$

$$-ve E = -ve [\text{mass} \cdot \text{frequency}] = [\{-ve m - \text{dot}\} \leftrightarrow (+) \leftrightarrow \{m \cdot -ve f\}]$$

$$(\&) + ve E = m - \text{dot} \quad \& +ve \text{ energy, potentially sourced via} \\ \{m \cdot -ve[m \cdot \lambda] = \{\text{gamma} \cdot \text{lambda}\} = \lambda^3$$

The combination can yield up model identity

$$-ve[\text{mass} \cdot \text{energy}] = 1$$

thus

$$[\text{mass} \cdot \text{energy}] = -ve 1 \equiv 1/\gamma^4$$

$$\text{Unity} = \lambda^0 \& \{n\} \times 2\pi \text{ repeats to } \lambda^{16} = \{2\}\pi, [\text{a.c.w.}], \text{ etc}$$

$$\text{And } -ve 1 = \lambda^8 \& \{n\} \times 2\pi \text{ repeats to } \lambda^{24}, [\text{c.w.}], \text{ etc}$$

Where  $\frac{+ve}{-ve} [1]$  can be fashioned by various periodic  $\{k^n\}$  of course also, with  $\frac{1}{2\pi} [\text{c.w.}]$  rotation sense application.

w.r.t. the Photo – electric effect

$$\text{kinetic energy } E = h.v - \emptyset$$

we see, that the **work function Phi**, can be seen as the need to overcome the **-ve** 'binding' energy perhaps,

and in any case it is a re – working of the previously stated unit model identity.

**The equivalence principle & G.R.**

The model says **-ve** mass =  $a \equiv$  gravity or 'curvature - geometry'

Thus  $a = k^3 = k - \text{dot} = \frac{1}{e}$ , and 'geometrically' = reciprocal Volume

Now looking at

$$G_{\mu\nu} = 8\pi G T_{\mu\nu}$$

My assumptions are,  $G_{\mu\nu}$  yields 'gravity' [a]

$T_{\mu\nu}$  is density Rho =  $\frac{\text{mass}}{\text{Volume}}$  or Boylesque gamma

Ignore factor [8] as states, or some such,  $G = k - \text{number}$ ,  $pi = 1/p = k^4 = 1/\gamma^2$

then we get

$$\begin{aligned} \text{Gravity} &= \pi \cdot k \cdot \rho \\ &= [k \cdot \rho] - dd \\ &= \{ [k - dd \cdot \rho] \leftrightarrow (+) \leftrightarrow [k - \text{dot} \cdot \rho - \text{dot}] \leftrightarrow (+) \leftrightarrow [k \cdot \rho - dd] \} \\ &= \left\{ \left[ \frac{\rho}{m} \right] \leftrightarrow (+) \leftrightarrow [a \cdot 1] \leftrightarrow (+) \leftrightarrow [k \cdot f] \right\} \leftarrow [3] \rightarrow \text{states} \end{aligned}$$

The 2nd & 3rd term are acceleration i.e. gravity [a], & equivalent  $k - \text{dot}$ , respectively

The 1st is equivalent to  $[\gamma/m] = 1/\text{energy} = [a]$

Thus we retrieve  $[-m \cdot m - \text{dot}] = 1$

-----

w.r.t. Boyle's Law,  $[PV] = \text{constant}$

can be,  $[\gamma - \text{dot} \cdot m - \text{dot}] = [1] \cdot \text{Energy}$

energy is the constant, gamma is the density,

& pressure  $P = F/A = [\gamma/\gamma] = \gamma - \text{dot} = 1$ , & energy =  $\lambda^3 = \text{Volume}$

Hooke also deserves a mention as alike Kepler, he, perhaps unwittingly?, pointed towards the model identity

**-ve**  $F \equiv \text{Omega}$ s with Hooke's law in 1660.

**Nullius in verba.**

There are multiple more examples I suggest, but hats off to Kepler in particular,

not to mention Tycho, & Kopernik, & Galileo 'eppur si muove'

& with certainty, Giordano Bruno 'the martyred one', had a stake also.

It seems a grand synthesis is in prospect, and lo! **'All Religions are 1'**. [W. Blake]

& now these three remain.

$$\mathbf{1.c} \quad [ \{ h - dd \cdot \lambda \} \leftrightarrow (+) \leftrightarrow \{ h - \text{dot} \cdot \lambda - \text{dot} \} \leftrightarrow (+) \leftrightarrow \{ h \cdot \lambda - dd \} ]$$



*On Raglan road of an Autumn's day I met her first & knew ... The 'Peasant poet' Patrick Kavanagh.*

*Aeons before the Big Bang &/or One bright blue Rose*

*This business of coincidence pegs on the Unity Wheel, can reveal some surprising results,  
but we have to jump severally back & forth along 'constant slope' radials which cut thro 'bothwise' +ve &  
-ve integer spirals, and dance thro 'fantasy & faith' ... well after a Fashion. Firstly Ludwig Boltzmann.*

$$S = k \log W$$

*I simplify [W] to equal energy, & / or Volume, &  $\lambda^3$  & / or  $m - \dot{}$  =  $\left[\frac{m}{\gamma}\right]$ . [k] Boltzmann's constant.*

$$\text{Then o.o.m calculations local scheme, } S = 10^{-23} \cdot \log [10^{11}]^3$$

$$\text{gives } S = [33] \times 10^{-23} \text{ or } 3.3 \times 10^{-22} \text{ or } 3.3 \times f = \frac{3.3}{\gamma} \text{ say } \frac{3}{\gamma}$$

$$\text{as } [f]_S = [k]_S^2 = [10^{-11}]^2 = [G]^2$$

*Now from Thermodynamiks: energy is  $m - \dot{}$  = ST*

*we get, [  $m = ST\gamma$  ] &  $[T] \cdot \gamma = \lambda^{14}$  [a.c.w.] is 'coincident' with [c.w]  $k^2$  = frequency f*

*Thus (mass)  $\sim S \cdot f$*

*can this be true? Well we embrace bothwise rotation or phase 'sense' coincidence in Nature in this model.*

$$[a.c.w. \text{ mass} - \text{peg}] @ [\lambda^5] \approx [k^{11}] @ [c.w. \{S \cdot f\} - \text{peg}] = \left[\frac{S}{\gamma}\right]$$

*& previously [S] was 3.f so now, [S].f = 3.f<sup>2</sup>*

$$= [3 \cdot \pi] \text{ as } [pi] = f^2 = k^4$$

*&  $k^4 = [\pi]_S$  is a [c.w.] coincidence peg with Temperature  $T = \lambda^{12}$  [a.c.w] -ve T = [p] & -ve. -ve T = [\pi]*

*So with seemingly no shame, ... I am claiming we have [3K @ pi peg] if not? ... then in the noise circa the -ve  $\pi$  peg @  $k^{12}$*

*the CMBR circa 3 deg is hereby viewed as a local system phenomenon.*

*[3] is the magnitude temp in Kelvin*

*&  $[\pi]_S$  is the position  $k^4 \approx \lambda^{12}$  peg co - existent in phase space radial of the generic  $\lambda$ s model with Temp.*

*We can say Temperature @  $\lambda^{12}$ , shares a common radial, with -ve T  $\equiv$  momentum [p], & -ve p  $\equiv$  [\pi]  $\equiv$  -ve. -ve T*

*All lie on the same slope, the lowest magnitude signal is on -ve [pi] or*

*-ve -ve. -ve T at {n = -12}, or  $[k^{12}]$  but that would be down in the noise I suspect @ mag circa  $10^{-132}$ .*

*The intermediate values are [\pi] & [p] @ integers*

*[n = -4, & +4] yield 'signals' circa  $10^{-44}$  &  $10^{44}$  respectively, and the highest magnitude would be T @ [n = 12], gives  $10^{132}$ .*

The System lambda thro generic Omega.

From the classical view  $-\omega^2 \cdot x = a$ , as shown previously, let  $[x = \text{lambda}]$  we can fashion

$$\omega^2 \cdot \lambda = -ve a \quad \& \quad -ve a = \frac{dS}{dt} = S - dot$$

also,  $\omega^2 = \frac{1}{T} = k^{12}$  from the wheel, whence from  $[mass = KT]$  we yield classical  $\omega = \sqrt{\left[\frac{K}{m}\right]}$

Then a model variant 'Thermodynamik & Entropik' model de Broglie presents itself.

System lambda  $\lambda S = [S.T] - dot$ , or in expansion

$$\lambda = \{ \{ S - dot.T \} \leftarrow (+) \rightarrow \{ S.T - dot \} \}$$

& we can devolve down to the Hooke constant here,

$$\lambda = [K.T] - dd \quad \text{gives [3] flavours}$$

$$\Lambda = \left\{ \left[ \frac{d^2 K}{dt^2} \cdot T \right] \leftarrow (+) \rightarrow \left[ \frac{dK}{dt} \cdot \frac{dT}{dt} \right] \leftarrow (+) \rightarrow \left[ K \cdot \frac{d^2 T}{dt^2} \right] \right\}$$

Then system  $[k]$  locally  $[G]$  is fashioned from lambda - dot,

$$\& \text{ gravity, } k - dot \equiv \text{lambda} - dd = [a], \dots \text{ locally } [h]$$

We state as.

$$[k] = [K.T] - ddd, = \omega KT$$

$$[a] = [K.T] - dddd = -ve [K.T] = [ \{ [-ve K] \cdot T \} \leftarrow (+) \rightarrow \{ K \cdot [-ve T] \} ]$$

$$\text{Gravity} = [ \{ \frac{d^3 S}{dt^3} \cdot T \} \leftarrow (+) \rightarrow \{ K \cdot \frac{d^3 T}{dt^3} \} ]$$

thus our local scheme gravitas pixel

$$[h] = \omega ST \leftarrow (+) \rightarrow Kp$$

Allows for a modern dynamik paradigm in

re - action  $\equiv -ve \text{ mass}$ , argument to augment the equivalent & discrete view

$$\text{classical } [a] = \frac{d^2 x}{dt^2}$$

$$\text{i.e. local system gravity} = [a] = [h] = \sqrt[4]{\left[\frac{K}{m}\right]} = \frac{1}{\sqrt[4]{T}} = \frac{1}{e}$$

thus our model classic variant  $[\gamma]$ ,  $-ve[m.m - dot] = \text{Unity}$

This invokes the quantum of Action, & classical mechanics Entropy & Thermodynamics

+ New  $\Lambda$ -model System Omega, Entropy.

From this we can produce a **hot** new model for time, alongside other variant possibilities,

System gamma = Force &/or time, as  $[\gamma]s = m. -vem$

Then System time can be expressed Thermodynamikly

$$\text{Time } \{t\}s = \frac{m}{[\sqrt[4]{T}]} = m. \mathbf{h}$$

Thermodynamikly we can develop further wheel associations.

$$F = dp/dt \text{ can be } -ve \text{ } T\text{-dot} = [\gamma]S \text{ Gamma}$$

$$-ve[\gamma]s \text{ could be } -ve. -ve [T - \text{dot}] = [\omega]s \text{ Omega}$$

This would suggest that the local De Broglie circa  $10^{11}$  (m)

Is our System lambda, yardstik exemplar of a 'closed' Physikle system in equilibrium with itself,

dynamikly self – regulating and @Peace! ... in Our best of all variant Worlds

... 'Tread softly, for you tread on my dreams!' W.B.Y.

Today 7-3-2019 we might add Olga's equation as it appears on Google doodle cartouche.

This is a partial differentiation Navier Stokes type solution of course, and we could imagine both-wise arrows occur linking  $\leftrightarrow$  all terms on r.h.s.

& now very greatly simplified to,

l.h.s of equality = chosen 'singular' last r.h.s term for convenience

$$\rho. \frac{Du}{Dt} = \rho. g$$

allowing usual wide latitude for the model, both sides utilise elements of

$$\{ \text{gamma} \equiv \text{Rho} \equiv \text{Metrik density} \equiv F \equiv t \equiv \text{Area} \} \times \left\{ \text{gravity} \equiv \text{acceleration} \equiv \frac{dv}{dt} \right\} \text{equivalence principles}$$

$$\equiv \rho. \mathbf{a}$$

$$= m.a.a$$

$$= m. [-vem. -vem]$$

$$= \omega. m$$

$$\rho. \frac{Du}{Dt} = \text{System } [k]$$

Appendix 1 : [e] numbers resonance with our local lambda scheme.

What about the numbers? ... follow the numbers.

Our lambda schemes use Logarithmic [e] .& we use o.o.m. calculations

We may note some resonance to familiars in Physik @ our local yardstick ... here { e } is standard Euler number, & { log } is base 10 ,

$$e^{\log[K]} \approx e^{[-77]} \approx 10^{-33} \sim -ve \text{ mass}, \quad \text{or } k - dot, \quad \text{or acc } [a] \sim [h]$$

$$e^{\log\left[\frac{1}{K}\right]} \approx e^{[77]} \approx 10^{33} \sim m - dot \text{ energy } [e]$$

$$e^{\log[S]} \approx e^{-99} \approx 10^{-43} \sim \text{System } [\pi] \sim \text{Planck } \{t\}$$

$$e^{\log\left[\frac{1}{S}\right]} \approx e^{99} \approx 10^{43} \sim \text{System } [p] = [mk] = GMm$$

$$\text{thus, } [e^{-\log S}] - dot = \frac{dp}{dt} = [m.k] - dot = \left[ \left\{ \frac{e}{\lambda} \right\} + \{m.a\} \right] \sim \frac{GMm}{r^2}$$

$$\text{Similarly, } \left[ e^{\log\left[\frac{1}{K}\right]} \right] - dot = \frac{1}{\gamma} \left[ e^{\log\left[\frac{1}{K}\right]} \right] \sim [\lambda]s$$

$$\& \quad [e^{\log S}] - dot = \frac{1}{\gamma} [e^{\log S}] \sim [\omega]s$$

$$\& \quad \left[ e^{\log\left[\frac{1}{S}\right]} \right] - dot = \frac{1}{\gamma} \left[ e^{\log\left[\frac{1}{S}\right]} \right] \text{ gives } \sim [\gamma]s$$

In shortened form  $e^{-22}$  or  $e^{Kb}$  ? or  $e^f$  , or  $e^{\left[\frac{1}{\gamma}\right]} \sim 10^{-10}$  circa Atomic lambda

$e^{-33}$  or  $e^{-vem}$ , or  $e^h$ , or  $e^a \sim 10^{-15}$  approx Nuclear lambda ....

$e^{-44} \sim 10^{-19}$  circa 'charge' [q] elektron

$e^{-55}$  or  $e^{\log\left[\frac{1}{Mm}\right]}$  , &  $e^{-66}$  or  $e^{\log \omega}$  , approx mass of nucleus & electron respectively

$e^{55}$  , &  $e^{66}$  approx mass of Earth & Sun respectively

$e^{121}$  & or  $e^{-\log[S]}$  approx product mass Mm

$e^{\log[S]} = e^{-121}$ ,  $\sim -ve[Mm] - dot \equiv 1/[Mm] \dots$  & so on.

Utilising the model view on Entropy & Hooke constant relationship  $S = K - \dot{\text{dot}}, \equiv \frac{dK}{dt}$

we can add further insight to the complex wheel, which yields  $\frac{1}{4}$  integer detail,

& we can state these here.

$$\lambda = e^{-\left[\frac{\log S}{4}\right]}, \quad \text{thus} \quad k = e^{\left[\frac{\log S}{4}\right]}$$

And we can build our model with  $\begin{pmatrix} + \\ - \end{pmatrix} \left\{ \frac{n}{4} \right\}$  incrementals

$\lambda$  – wise [a. c. w.] &  $k$  – wise [c. w.], respectively.

$$\text{System Gamma} = \lambda^2 \text{ or } \gamma = e^{\left[-\frac{1}{2} \log S\right]} \quad \text{System frequency } f = \frac{1}{\gamma}, \quad f = e^{\left[\frac{1}{2} \log S\right]}$$

the mixture of [e] here with base 10 [Log] is probably a reflection of the chosen S.I. units using base 10, and the fact that Natural logs govern growth scenarios in Nature.

$$\text{Energy } e = e^{\left[-\frac{3}{4} \log S\right]} \quad \text{momentum } p = e^{\left[-\log S\right]} \quad \text{mass } m = e^{\left[-\frac{5}{4} \log S\right]}, \quad m \cdot \lambda = e^{\left[-\frac{3}{2} \log S\right]},$$

& so on, –ve  $\{n \times \frac{1}{4}\}$  integer increments,

$$\& \text{Acceleration } a = e^{\left[\frac{3}{4} \log S\right]}, \quad \pi = e^{\left[\log S\right]}, \quad -ve \text{ energy} = 1/m = e^{\left[\frac{5}{4} \log S\right]}, \quad \text{Omega } \omega = e^{\left[\frac{3}{2} \log S\right]},$$

etc +ve  $\{n \times \frac{1}{4}\}$  integer increments

$$\text{Thus } \{c.w\} \text{ peg } [k^9] = \text{entropy yields } S = e^{\left[\frac{9}{4} \log S\right]}$$

& as [S] could be any dummy parameter [\$] yields a familiar,

$$\ln[ \$ ] = \frac{9}{4} \log[ \$ ],$$

Which is a reasonable 1st order approximation on the standard conversion ratio.

However we can probably do better using the variant Gamma expression

$$m = \gamma \cdot e^{-\log K}$$

transpose the gamma to give

$$m - \text{dot} = e^{-\log K}$$

Where  $m - \text{dot} = \text{energy } [e] = \text{lambda}^3$ , and  $K = \text{Hooke constant } [k^7] = \text{lambda}^{-7} = \gamma \cdot S$

Where I further suggest

Boltzmann's constant  $K_B = \text{frequency of our local scheme say approx. } 10^{-22} = \frac{1}{\text{gamma}}$

Thus Boltzmann's law  $S = K \log W$ , can be  $S \cdot \gamma = \log e$  where I say  $W \sim \text{energy in a sense}$

Thus we get Hooke  $[K] = \ln \text{energy}$ , as log used here is/can be  $[\ln]$ . Still not quite there?, so it requires a slight mod, and we get back to the model variant here.

Thus we suggest Boltzmann's entropy identity is a model gamma variant, when we add on l.h.s. of equality a  $[\log]$  & sign change  $[-ve]$ , as below\*,

allowed by previous assumptions, only, of course.

Could this sign change be **entaxy**? as hypothesis mentioned by at least 1 respectable contemporaneous source,... spared identification.

\*Thus re-modelled Boltzman could be  $\{-\log K = \ln e\}$ , then as energy  $= m - \text{dot} = \lambda^3$ , & Hooke  $[K] = \frac{1}{[m \cdot \gamma]} \equiv \lambda^{-7}$

$$m - \text{dot} = e^{-ve \log K}$$

$$\lambda^3 = e^{-\log \lambda^{-7}}$$

$$3 \ln \lambda = -(-7 \log \lambda)$$

or equivalently in conventional math

$$3 \ln \lambda = 7 \log \lambda$$

$$\ln \lambda = \frac{7}{3} \log \lambda$$

I give you the end of a Golden string, ... thus,  $\ln \lambda^n = n \left\{ \frac{7}{3} \right\} \log \lambda$  the  $\lambda$  - model para-metrik

e.g.  $\{n = 3\}$  energy,  $\lambda^3 = e^{7 \log \lambda}$  &  $\{n = -3\}$  acc gives,  $\lambda^{-3} = e^{-7 \log \lambda}$

&  $\{n = -6\}$   $\omega$  gives,  $\lambda^{-6} = e^{-14 \log \lambda}$

entropy  $S \{n = -9\}$ ,  $k^9 = e^{-21 \log \lambda}$  &  $S - \text{dot} \equiv \frac{dS}{dt} \sim k^{11} = e^{-\frac{77}{3} \log \lambda}$  etc



*Note: coincidence pegs on the Unity wheel & suggestive of evolved or emergence paradigms w.r.t. gravity, omega & entropy*

$$\omega \equiv \left[ \frac{k}{m} \right] \equiv a^2 \quad \text{or equivalently} \quad [k - \text{dot}]^2 = [k.k - dd] \text{ 'sits on (c.w.) } k^6 \text{ peg}$$

*is after + 1 cycle, coincident with*

$$\{\text{c.w.}\} k^{22} \text{ peg,} \quad \text{or,} \quad [S - \text{dot}]^2 \equiv \left[ S \cdot \frac{d^2 S}{dt^2} \right]$$



*Dante Virgil & the Elektrik Apple by Matagouri 2018*

*In proud memory of Frances Q Sullivan,... 'and you smile up at us Eternally.'*



## Appendix 2: Generik & basic Map of Key points

*the idea here is to show inherent cyclicity of the positive kind, i.e. re – affirming the model.*

*We start with the basic model Gamma variant, and allow*

*dot operator & -ve operator  $x [n]$  – times, as it suits our model views.*

$$\text{-ve } [m . m - \text{dot}] = 1 \quad \text{equation 1.}$$

*Now we say the -ve Operator can translate under an effect, call it a Platonik ‘omega’ across, either of the couplet or product mass x energy, & inclusive of the frequency [-dot] operator which is reciprocal gamma, and this in turn can act on either of the mass subjects in product [m.m] to derive [m.m]-dot expanded to {2} states which may seem to be conventionally redundant thro commutation or association laws in Math, ie.*

*[m-dot.m] + [m.m-dot] . Inclusion of -ve operation here, is equivalent of course to equation 1.*

*But we state that the -ve can also apply to the frequency. The dynamic fluxions that arise, are due in a sense to this fluidity inherent in this model.*

*In modulus terms the -ve Operator is equivalent to a multiplication by reciprocal  $\gamma^4$ ,*

*& it also has phase aspects common & familiar in Complex numbers, say the Imaginary & Real Unit circle diagram. i.e*

$$\frac{1}{\gamma^4} = \frac{1}{\lambda^8} = k^8 = \{c.w\} \text{ phase rotation by } \frac{1}{2} \text{ cycle}$$

*Now we are ready to apply this set of rules and mix & match results, we need to be wary of phase as often a {c.w} parameter can sit in coincidence withan [a.c.w] parameter, thus ‘equalities’ need to be examined carefully, especially so at the Unit- $\lambda$  circle case, so  $\frac{3}{4}$  cycle [c.w] (is coincident with) [a.c.w]  $\frac{1}{4}$  cycle.*

*Thus it seems,*

$$\{c.w\} \quad k^{12} = \lambda^4 \{a.c.w\}$$

$$\text{or,} \quad \omega^2 = p ,$$

$$\text{or,} \quad \frac{d^2 E}{dt^2} = p$$

$$\text{or,} \quad k \cdot \frac{dS}{dt} = p$$

*Multiple cases may compete, but these are readily resolved with closer inspection & model rules that apply to*

*all Lambda schemes, Not = Unity.*

$$\text{We can derive (1.a) } -ve m . m - \text{dot} = 1 = \frac{m}{m}$$

*as -ve energy = reciprocal mass, also -ve mass = acceleration, so minimal Algebra later*

$$\text{-ve } m . m . m - \text{dot} = m \quad \text{then, as gamma} = -[m.m], \text{ we have } \gamma . m - \text{dot} = m, \quad \text{or model Einstein}$$

*thus the familiar version of (1) say*

$$(1.b) \quad a . e = 1$$

*which is a royal key to de – cypher most everything that exists, or can exist? in Physikle Lambda Systems.*

Till Homer's ghost came whispering to my mind.  
 He said: I made the Iliad from such  
 A local row. Gods make their own importance.

### Conclusions & Summary of the broad points:

Firstly It is clear the Veritas identity is in essence a serendipitous guess at perhaps an underlying, yet of course always present Platonic view of System  $\gamma$  &/or  $\omega$  expression, leading ultimately to a self-consistent & Greater generic  $\lambda$  model view.

The Gamma or Omega take is dependent on such aspects as  $[h]$  represents +ve / -ve mass & likewise multiple sign combinations for the other parameters such as  $\lambda$ , frequency (2) or  $\pi = 1/p$  in the Veritas, it is exceptionally fecund, if we allow full model scope.

A striking aspect of this model is the equality view for the magnitude of Planck's constant  $[h]$  and our local scheme gravity pixel  $\lambda_{dd} = [a]$ , i.e. quantization of gravity in the model. Gravity acceleration is an -ve mass concept employed, so in this sense it is also a local quantization of mass.

This gives rise to an heretical aspect of the model i.e. the hypothesis that the photon is not massless, potentially it has -ve mass circa, magnitude  $[h]$ . The model allows for this, such that on the wheel,  $\lambda^4 = \text{momentum } [p] = [m.k]$ , where a typical photonic  $\lambda$  say Sodium 589nm is circa  $10^{-6}$  m thus  $[k] = 10^6$ , can yield a magnitude circa the nuclear mass.

Energy =  $\lambda^3$  aligns well for the standard  $E=h\nu$  model etc, where  $[v] = f = k^2$  circa  $10^{12}$ , thus we view the photon as an exotic atom of -ve mass in highly dynamic fluxions producing all the standard parameters we expect.

Thus we can predict it's local gravity =  $[k^3] = 10^{18} \text{---} 10^{20}$  say, the omega as we say for small schemes is circa  $10^{36} \text{---} 10^{39}$ , or so  
 & note that is circa the ratio of the familiar ratio  $[Fe/Fg]$ .

The other related major assumption in the Lambda model Hypothesis is the idea of scale invariance.

This leads rather directly to a model statement that there are No Universal constants in Nature,... only System no.s.

It is also evident that -ve  $\gamma$  force yields a system  $\omega$ , with enhanced gravitational qualities, which assist a current view on the emergent properties paradigms. Example this  $[\omega]$  dominates the classical & standard 2<sup>nd</sup> order force expression, by introducing entropy & entropy-rate, acting in product with energy & mass respectively.

In other words modelled omega is not 'negative or anti-gravity' it is enhanced or augmented gravity.

Therefore we present a new Gravity model in Nature, which may help to explain some current anomalies.

Thus w.r.t. the Galactic rotation curves problems, we may not need hidden mass &/or energy, but allow for the metrik density view, system  $\gamma \sim [\rho] \propto 1/r^3$ , is our model M.O.N.D. aspect. + proposed photon mass. and along with the Omega allows augmented additional 'gravity-effects'.

This -ve operator is model mode, i.e. double negatives, do not cancel out in a conventional math sense,  
 but act in tandem to doubly embed the  $[c.w.]$  phase.

Different system numbers for large & especially smaller 'mutual' or emergence sub-systems, say as example

'nested' Atomik schemes, may give rise to many & varied 'false dopplers', in multiple other schemes.

We cannot simply apply our local yardsticks as Universal, but must employ re-calibrations to locally sourced time & length measures, etc.

Atomic spektra may seem shifted, red & blue, but this too may not necessarily be Isotropikly or otherwise too.

On the locally Macro scale the C.MB. may also be viewed as a localised phenomenon, such that the tandem  $[v]$  steps on Temperature could represent the very low magnitude temp~  $[3K]$  observed within the noise spectrum.

Other lambda schemes may herald local selection effects, which may be? discernible even from a neighbouring planetary body.

What Temp is the CMB from the Martian surface, how Old does the Universe look from the red planet.

Is it possible to tell or discern anomalies at such a nearby location,? The metric density model may offset differing [Mm] by new De Broglie, we may need to look at other Solar systems.

Initial o.o.m. calculations suggest that Gaussian mass distribution allows all Planets to have same order or so Gmma approx.  $10^{20}$

Entropy is seen in a new light within the model. [We don't assume a curve exists from B.B. scenario to  $\{t\} = \text{now.}$ ]

Entropy in the model is qualitatively scale dependent, and the disorder paradigm has been nuanced to reflect an Entaxy mode or view, whereby classical order [S-State] characteristics may result in Large lambda schemes, & the early? chaotic state called a Big bang! may be mostly relevant as representative albeit separate case paradigm for highly energetic small lambda schemes, etc.

The B-field is mooted as entropy [S] for a micro-lambda scheme,  
or quantum atomic scale system.

Entropy rate  $dS/dt$  is seen as  $-ve$   $a \equiv -ve, -ve$  mass, at  $[k^{11}]$  or  $[G^{11}] \sim 10^{-123}$ , which aligns with estimates for Einsteins's Cosmological constant  $\Lambda$ .

This is dimensionally 11 lambda orders 'down in the mix, local scheme' & could also be a contender for dark energy perhaps.

The lambda model is offered as a physikly plausible system/s & possible antidote to amongst other aspects, the Plethora of 'Multiverse/s' & related schemes. Thus accommodating richness of variety & much diversity in a self-consistent logical structure that does not require, bold Philosophical view/s exemplified by generic statements, often imparted so as to be taken up quite literally!, & of the form,

'everythingness possible that could be true, ... must be true & must be so!'

The fine tuning argument may be resolved as simply extant resonance conditions of integer aspect within each system thus Anthropocentrism is of necessity our local & parochial view.

& What of the rood of time?

It appears that time is indeed System relative & it is fundamentally Physikle! ie

dynamik & systemikly Geometrik.

What we perceive as time-flow is differential ageing, i.e. differing resonance beats of multiple naturally variant system clocks.

It is plausible here, there is no background clock, there may not even be, a background, back-ground,..

just a rich interlaced symphony or euphony of essentially separated, yet, often mutual systems, existing as 'bubbles of time' forcefully ticking along, unique resonance & multiples of subtle assonance, cheek by Jowl, in a harmony of Worlds view.

& as far as we can tell? we inhabit just One of these, ... potentially the best of all possible Worlds.

To see a World in a grain of sand or a Heaven in a wild flower,.. hold infinity in the palm of your hand & eternity for an hour. W.Blake.

Caveat: The Author, makes no claim to special or expert knowledge in the fields discussed in this paper.

Rather I would be an itinerant 'Natural Philosopher', an ongoing student of Physik, forever in awe & appreciation of the many gifts we receive, thro the bountiful Action of the Great Spirit in Nature. Matagouri 20 March 2019 Also my latin is worse than my Greek, which is zero don't be fooled.

" Sero te amavi, pulchritudo tam antiqua et tam nova, sero te amavi! et ecce intus eras et ego foris, et ibi te quaerebam."

St. Augustine — Confessions (c.397)